FIG. 1

		Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	MIXTURE RATIO	REMARKS
EXAMPLE 1	LOW R ALLOY	26.4	5.5	-	31.9	1.06	0.2	—	-	bal.	95	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY
	HIGH R ALLOY	-	-	60.2	60.2	-	0.2	10.2	1.4	bal.	5	
EXAMPLE 2	LOW R ALLOY	25.3	5.7	-	31.0	1.12	0.2	-	-	bal.	90	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY
	HIGH R ALLOY	29.2	0.1	30.3	59.6	-	0.2	5.0	0.7	bal.	10	
COMPARATIVE EXAMPLE 1	LOW R ALLOY	22.0	5.8	3.4	31.2	1.12	0.2	-	-	bal.	90	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN LOW R ALLOY
	HIGH R ALLOY	29.0	0.2	-	29.2	-	0.2	5.0	0.7	bal.	10	
COMPARATIVE EXAMPLE 2	LOW R ALLOY	24.1	5.5	3.2	32.8	1.06	0.2	-	-	bal.	95	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN LOW R ALLOY
	HIGH R ALLOY	59.6	0.2	-	59.8	-	0.2	10.2	1.4	bal.	5	

FIG. 2

	Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	Br (kG)	HcJ (kOe)
EXAMPLE 1	25.1	5.2	3.0	33.3	1.0	0.2	0.5	0.1	bal.	12.90	23.09
EXAMPLE 2	25.7	5.1	3.0	33.8	1.0	0.2	0.5	0.1	bal.	12.78	23.12
COMPARATIVE EXAMPLE 1	25.6	5.2	3.1	33.9	1.0	0.2	0.5	0.1	bal.	12.51	23.18
COMPARATIVE EXAMPLE 2	25.9	5.2	3.0	34.1	1.0	0.2	0.5	0.1	bal.	12.50	23.17

FIG. 3A

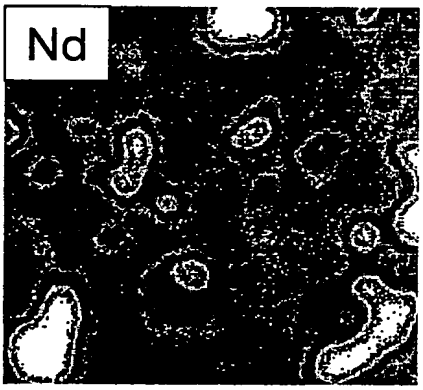


FIG. 3B

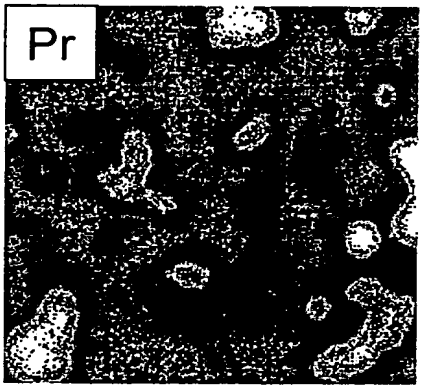


FIG. 3C

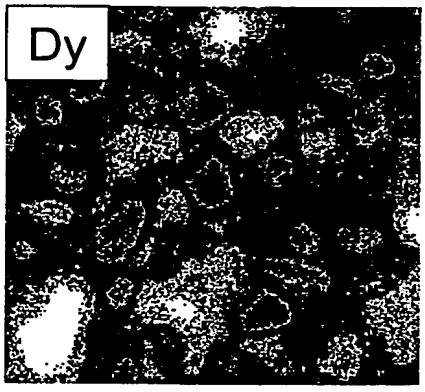
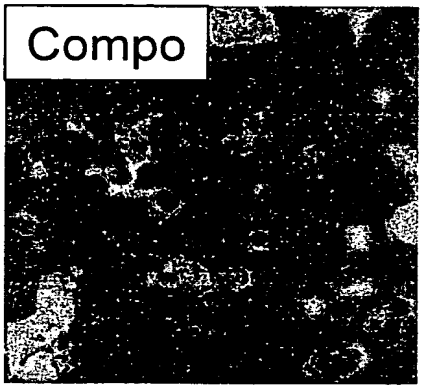


FIG. 3D



10μm

FIG. 4A

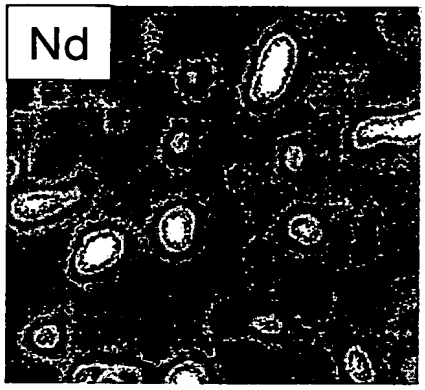


FIG. 4B

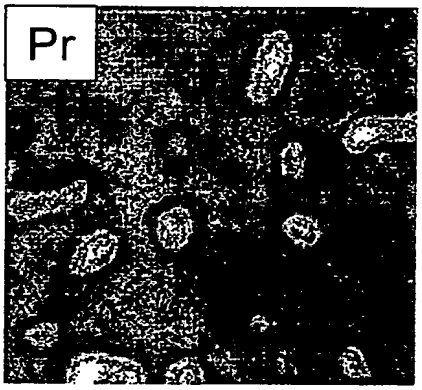


FIG. 4C

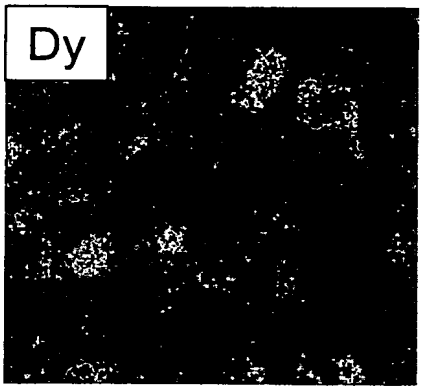


FIG. 4D

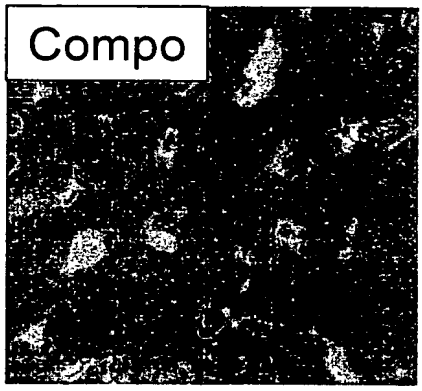


FIG. 5

	AVE(X)	Y	AVE(X)／Y	(X／Y)min	(X／Y)max	(X／Y)max／(X／Y)min
EXAMPLE 1	7.58	9.01	0.84	0.12	1.43	11.92
EXAMPLE 2	8.08	8.88	0.91	0.15	1.33	8.87
COMPARATIVE EXAMPLE 1	10.14	9.14	1.11	1.01	1.25	1.24
COMPARATIVE EXAMPLE 2	10.21	8.80	1.16	1.05	1.27	1.21

FIG. 6

	Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	Br (kG)	HcJ (kOe)
EXAMPLE 1	25.1	5.2	3.0	33.3	1.0	0.2	0.5	0.1	bal.	12.90	23.09
EXAMPLE 3	25.0	5.2	3.0	33.2	1.0	0.2	0.5	0.1	bal.	12.91	22.83
EXAMPLE 4	25.4	5.1	3.1	33.6	1.0	0.2	0.5	0.1	bal.	12.89	22.22
EXAMPLE 5	25.1	5.2	3.1	33.4	1.0	0.2	0.5	0.1	bal.	13.04	21.14

FIG. 7

	AVE(X)	Y	AVE(X)／Y	(X／Y)min	(X／Y)max	(X／Y)max／(X／Y)min
EXAMPLE 1	7.58	9.01	0.84	0.12	1.43	11.92
EXAMPLE 3	7.50	9.04	0.83	0.22	1.32	6.00
EXAMPLE 4	7.87	9.22	0.86	0.18	1.37	7.61
EXAMPLE 5	8.35	9.27	0.89	0.16	1.53	9.56

FIG. 8

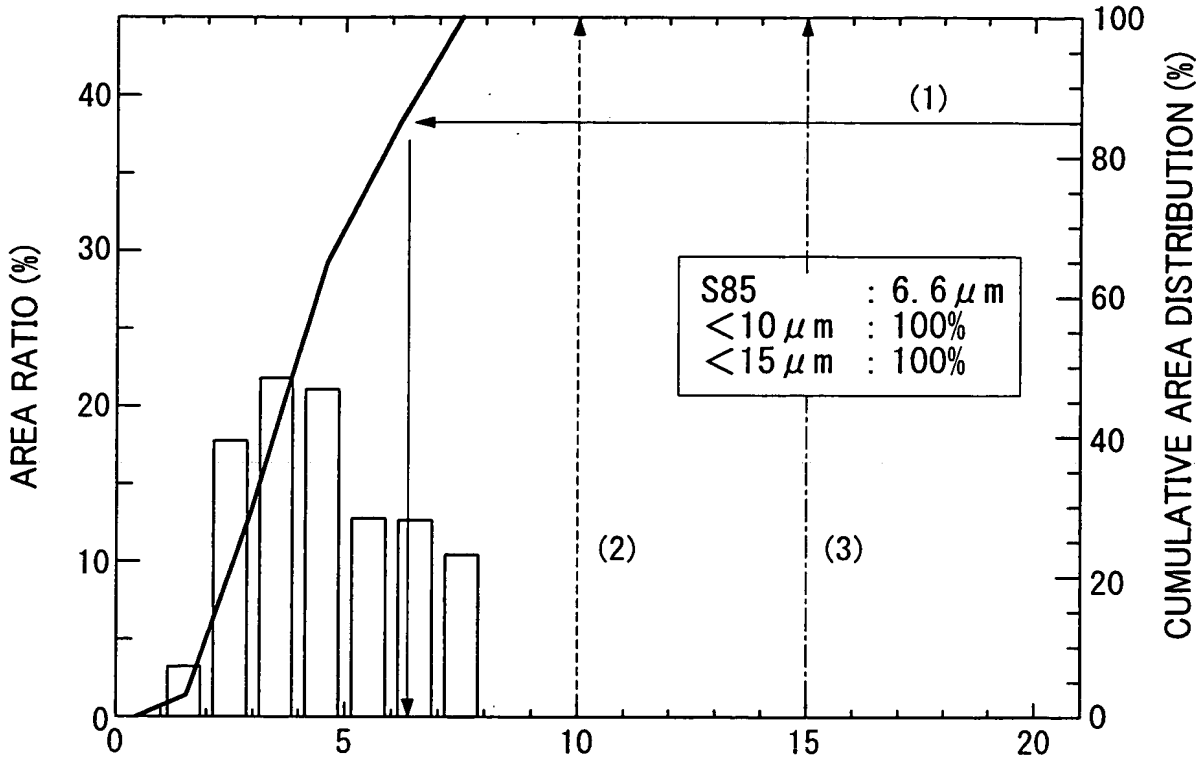

AREA RATIO (%)
CUMULATIVE AREA DISTRIBUTION (%)
0
10
20
30
40
0
20
40
60
80
100
0
5
10
15
20
(1)
(2)
(3)
S85 : 6.6 μm
<10 μm : 100%
<15 μm : 100%

FIG. 9

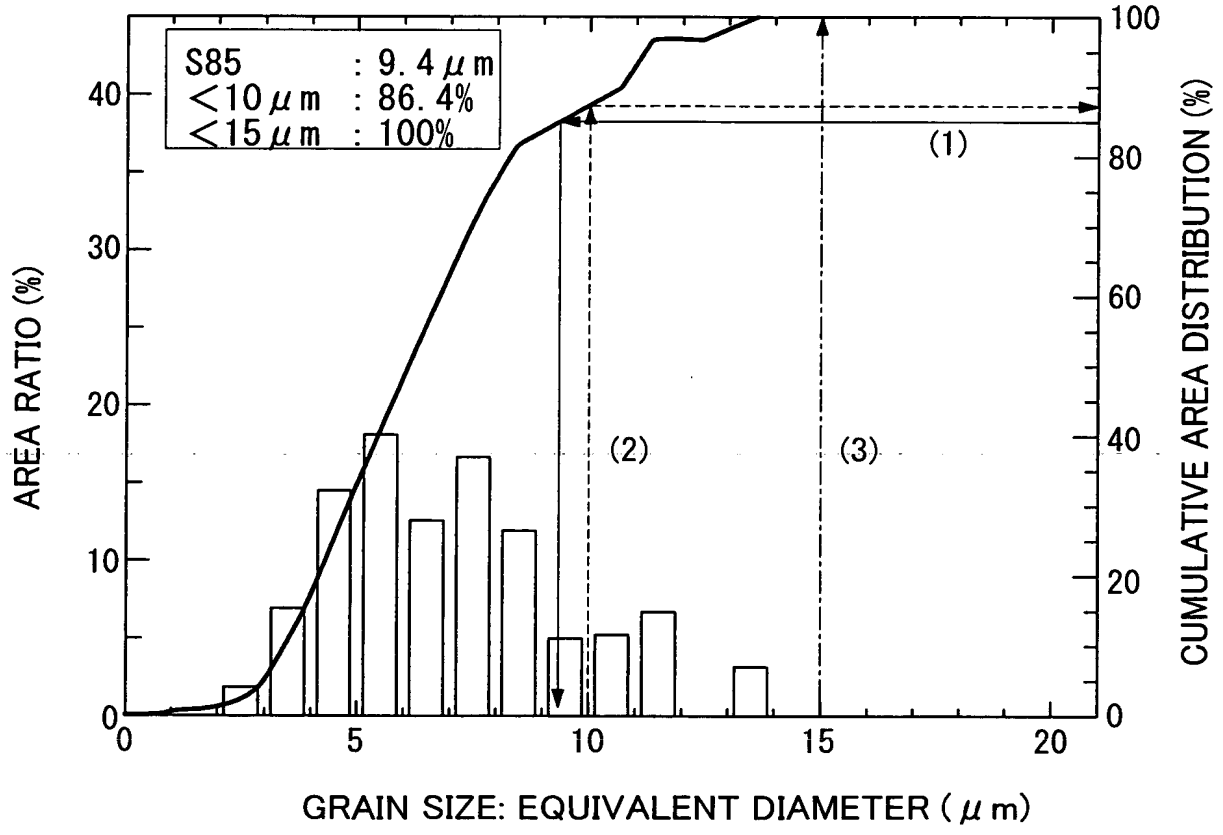

S85 : 9.4 μm
<10 μm : 86.4%
<15 μm : 100%
(1)
(2)
(3)
AREA RATIO (%)
CUMULATIVE AREA DISTRIBUTION (%)
GRAIN SIZE: EQUIVALENT DIAMETER (μm)
0
10
20
30
40
0
20
40
60
80
100
0
5
10
15
20

FIG. 10

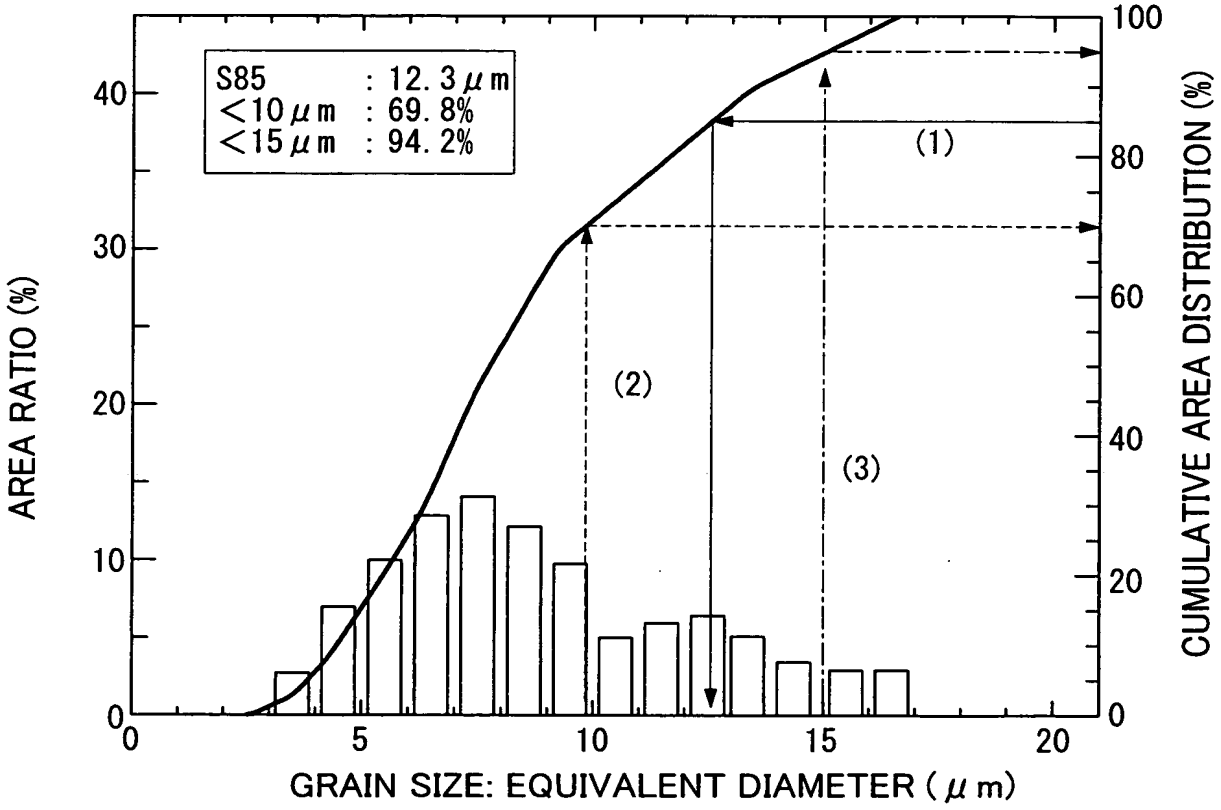


FIG. 11

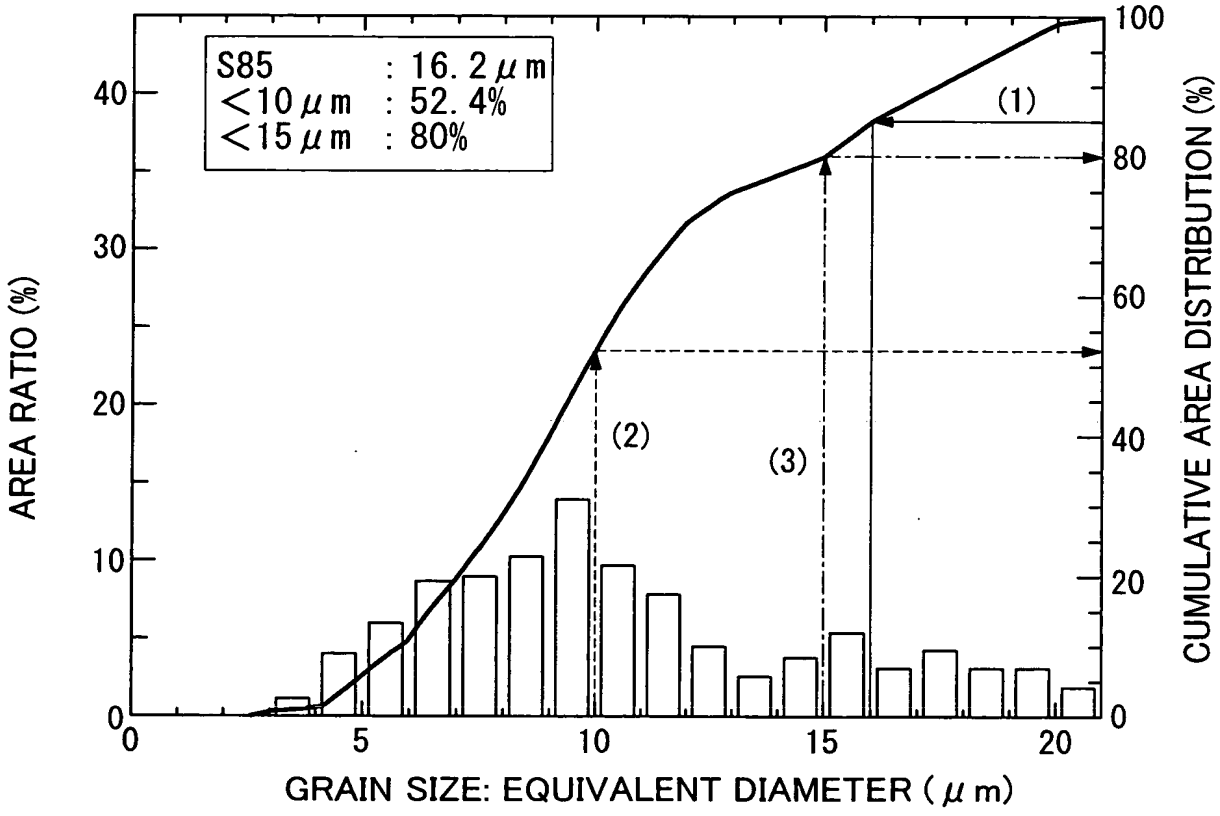


FIG. 12

		Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	MIXTURE RATIO	REMARKS
EXAMPLE 6	LOW R ALLOY	27.5	-	4.1	31.6	1.06	0.2	—	-	bal.	95	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY AND IN LOW R ALLOY
	HIGH R ALLOY	-	-	46.0	46.0	-	0.2	10.0	2.0	bal.	5	
EXAMPLE 7	LOW R ALLOY	29.4	-	2.2	31.6	1.06	0.2	-	-	bal.	95	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY AND IN LOW R ALLOY
	HIGH R ALLOY	-	-	46.0	46.0	-	0.2	10.0	2.0	bal.	5	
COMPARATIVE EXAMPLE 3	LOW R ALLOY	22.4	-	7.1	29.5	1.12	0.2	-	-	bal.	90	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN LOW R ALLOY
	HIGH R ALLOY	59.0	-	-	59.0	-	0.2	5.0	1.0	bal.	10	
COMPARATIVE EXAMPLE 4	LOW R ALLOY	25.0	-	4.0	29.0	1.28	0.2	-	-	bal.	80	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY AND IN LOW R ALLOY
	HIGH R ALLOY	33.5	6.0	6.5	46.0	-	0.2	2.5	0.5	bal.	20	

FIG. 13

	Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	Br (kG)	HcJ (kOe)
EXAMPLE 6	26.0	-	6.2	32.2	1.0	0.2	0.5	0.1	bal.	12.60	25.00
EXAMPLE 7	27.8	-	4.4	32.2	1.0	0.2	0.5	0.1	bal.	13.00	23.62
COMPARATIVE EXAMPLE 3	25.9	-	6.3	32.2	1.0	0.2	0.5	0.1	bal.	12.31	25.00
COMPARATIVE EXAMPLE 4	26.6	1.2	4.5	32.3	1.0	0.2	0.5	0.1	bal.	12.60	23.60

FIG. 14A

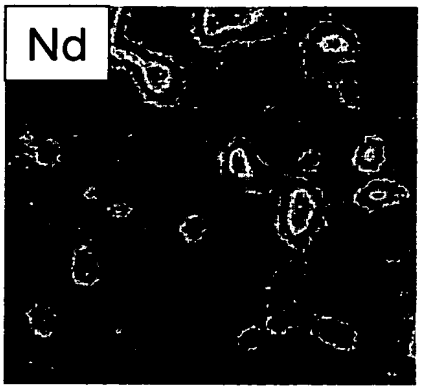


FIG. 14B

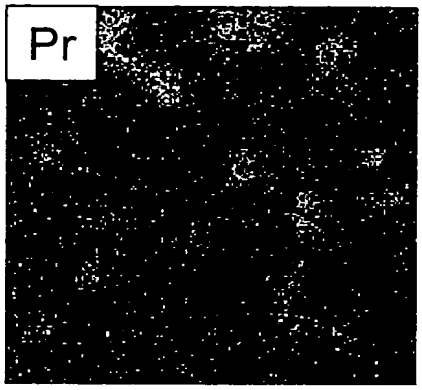
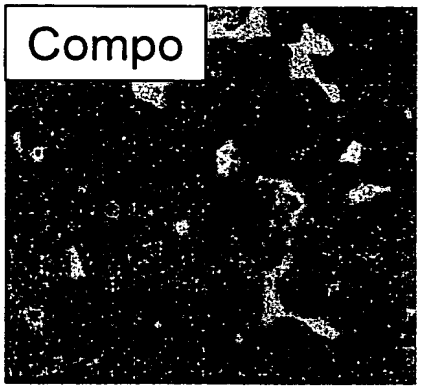


FIG. 14C

FIG. 14D



10μm

FIG. 15A

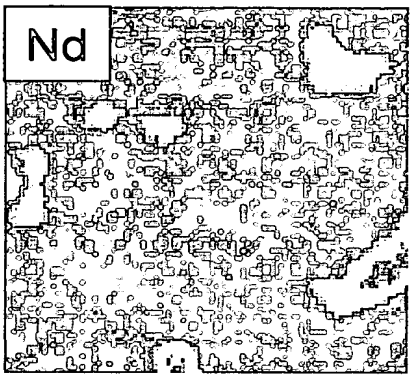


FIG. 15B

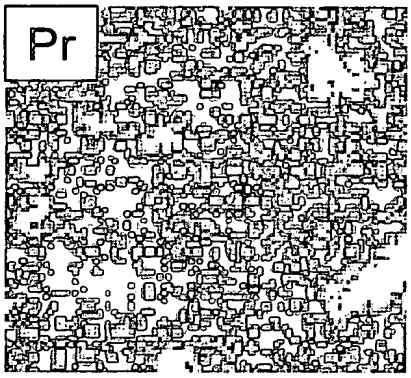


FIG. 15C

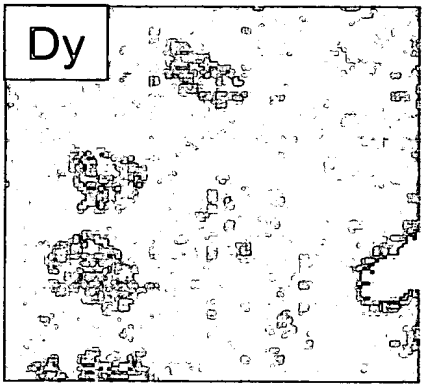


FIG. 15D

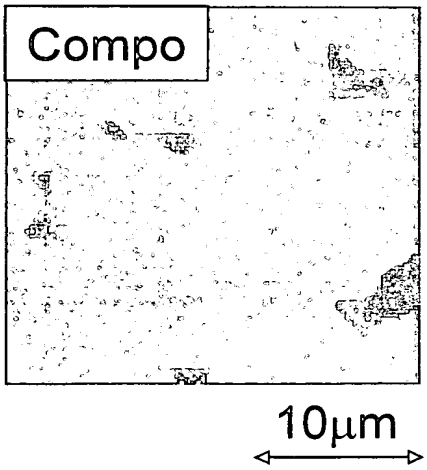


FIG. 16

	AVE(X)	Y	AVE(X)／Y	(X／Y)min	(X／Y)max	(X／Y)max／(X／Y)min
EXAMPLE 6	16.54	19.25	0.85	0.40	1.04	2.60
EXAMPLE 7	13.14	13.66	0.96	0.51	1.12	2.20
COMPARATIVE EXAMPLE 3	20.74	19.57	1.06	0.88	1.31	1.49
COMPARATIVE EXAMPLE 4	15.70	14.98	1.05	0.73	1.33	1.82

FIG. 17

	S50 (μm)	S85 (μm)	<10μm (%)	<15μm (%)
EXAMPLE 6	8.29	12.1	64.6	100
EXAMPLE 7	9.90	14.6	50.4	88.1
COMPARATIVE EXAMPLE 3	10.37	17.4	24.6	69.0
COMPARATIVE EXAMPLE 4	12.48	16.3	32.1	75.1

FIG. 18

		Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	MIXTURE RATIO	REMARKS
EXAMPLE 8	LOW R ALLOY	26.9	5.6	–	32.5	1.06	0.2	—	–	bal.	75	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY
	LOW R ALLOY	29.9	5.6	–	0.0	1.06	0.2	–	–	bal.	20	
	HIGH R ALLOY	–	–	60.0	60.0	–	0.2	10.0	1.4	bal.	5	
COMPARATIVE EXAMPLE 5	LOW R ALLOY	26.3	5.7	–	32.0	1.12	0.2	–	–	bal.	60	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN HIGH R ALLOY AT 30% OR LESS BY WEIGHT
	LOW R ALLOY	19.6	5.4	7.5	32.5	1.06	0.2	–	–	bal.	31	
	HIGH R ALLOY	60.0	–	–	60.0	–	0.2	5.0	0.7	bal.	7	
	HIGH R ALLOY	16.0	–	44.0	60.0	–	0.2	10.0	1.4	bal.	2	
COMPARATIVE EXAMPLE 6	LOW R ALLOY	26.3	5.7	–	32.0	1.12	0.2	–	–	bal.	60	HEAVY RARE EARTH ELEMENT (Dy) CONTAINED IN LOW R ALLOY
	LOW R ALLOY	17.5	5.4	9.7	32.6	1.06	0.2	–	–	bal.	31	
	HIGH R ALLOY	60.0	–	–	60.0	–	0.2	5.0	0.7	bal.	7	
	HIGH R ALLOY	60.0	–	–	60.0	–	0.2	10.0	1.4	bal.	2	

FIG. 19

	Nd (wt%)	Pr (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	Br (kG)	HcJ (kOe)
EXAMPLE 8	26.2	5.3	3.0	34.5	1.0	0.2	0.5	0.1	bal.	12.68	23.68
COMPARATIVE EXAMPLE 5	26.2	5.1	3.2	34.5	1.0	0.2	0.5	0.1	bal.	12.65	22.60
COMPARATIVE EXAMPLE 6	26.3	5.1	3.0	34.4	1.0	0.2	0.5	0.1	bal.	12.66	22.44

FIG. 20A

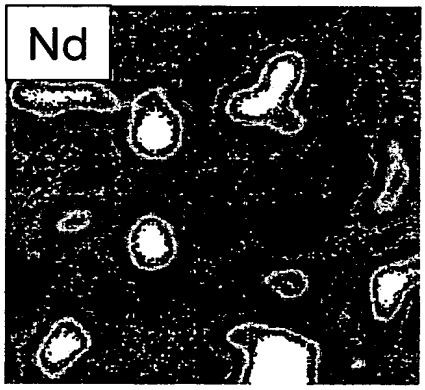


FIG. 20B

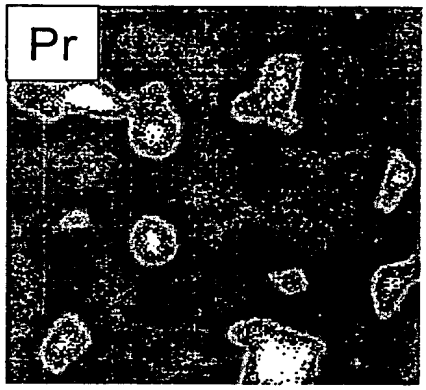


FIG. 20C

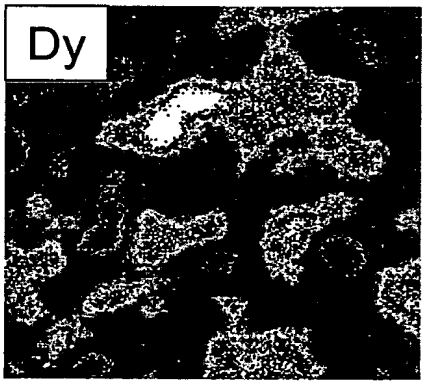
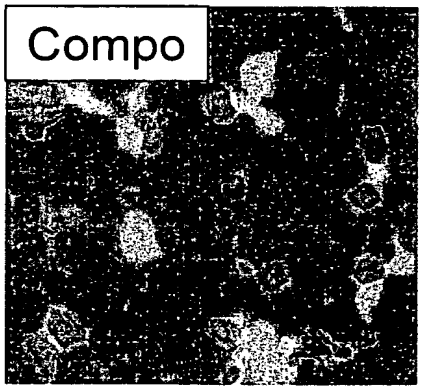


FIG. 20D



10μm

FIG. 21A

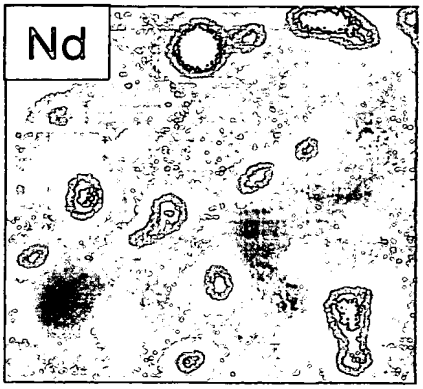


FIG. 21B

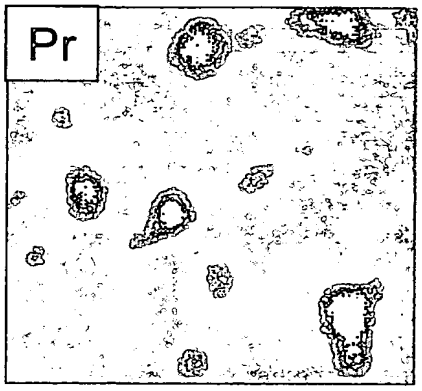


FIG. 21C

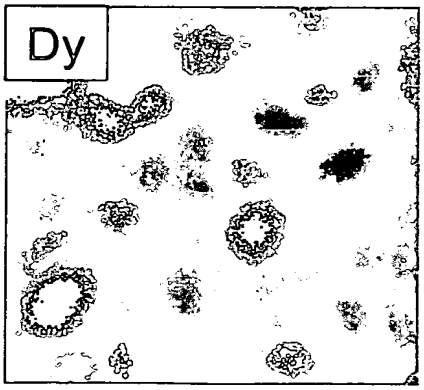


FIG. 21D

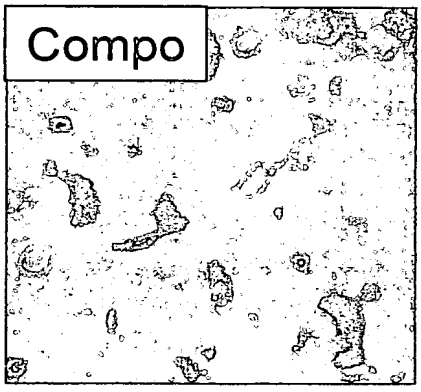


FIG. 22

	AVE(X)	Y	AVE(X)／Y	(X／Y)min	(X／Y)max	(X／Y)max／(X／Y)min
EXAMPLE 8	7.40	8.70	0.85	0.20	1.31	6.55
COMPARATIVE EXAMPLE 5	9.70	8.75	1.11	0.21	2.43	11.57
COMPARATIVE EXAMPLE 6	8.25	8.72	0.95	0.16	2.60	16.25

FIG. 23

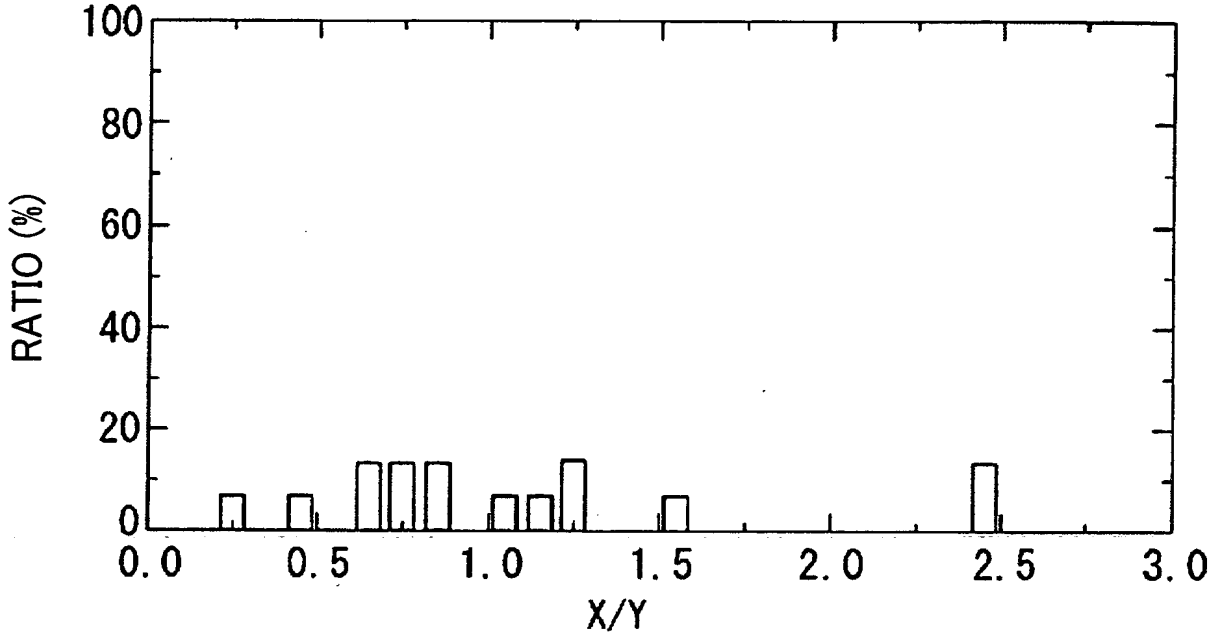


FIG. 24

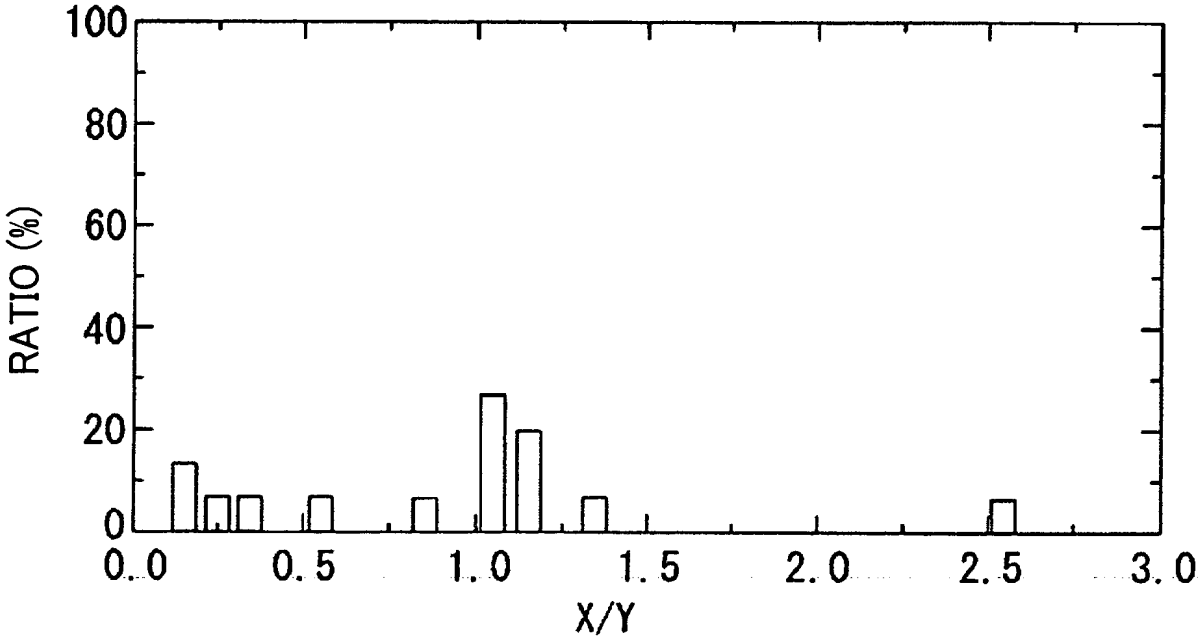


FIG. 25

		Nd (wt%)	Tb (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	(MIXTURE RATIO)
EXAMPLE 9	LOW R ALLOY	30.3	-	30.30	1.06	0.2	-	-	bal.	70
	LOW R ALLOY	24.6	5.7	30.30	1.06	0.2	-	-	bal.	25
	HIGH R ALLOY	-	46.0	46.00	-	0.2	10.0	2.0	bal.	5
EXAMPLE10	LOW R ALLOY	30.3	-	30.30	1.06	0.2	-	-	bal.	60
	LOW R ALLOY	26.3	4.0	30.30	1.06	0.2	-	-	bal.	35
	HIGH R ALLOY	-	46.0	46.00	-	0.2	10.0	2.0	bal.	5
COMPARATIVE EXAMPLE 7	LOW R ALLOY	26.4	3.9	30.30	1.06	0.2	-	-	bal.	95
	HIGH R ALLOY	46.0	-	46.00	-	0.2	10.0	2.0	bal.	5
COMPARATIVE EXAMPLE 8	LOW R ALLOY	27.1	3.1	30.20	1.06	0.2	-	-	bal.	55
	LOW R ALLOY	25.3	5.0	30.30	1.06	0.2	-	-	bal.	40
	HIGH R ALLOY	46.0	-	46.00	-	0.2	10.0	2.0	bal.	5

FIG. 26

	Nd (wt%)	Tb (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	Br (kG)	HcJ (kOe)
EXAMPLE 9	27.3	3.7	31.0	1.0	0.2	0.5	0.1	bal.	13.45	24.1
EXAMPLE 10	27.3	3.7	31.0	1.0	0.2	0.5	0.1	bal.	13.43	24.2
COMPARATIVE EXAMPLE 7	27.3	3.7	31.0	1.0	0.2	0.5	0.1	bal.	13.19	24.4
COMPARATIVE EXAMPLE 8	27.3	3.7	31.0	1.0	0.2	0.5	0.1	bal.	13.20	24.7

FIG. 27

	AVE(X)	Y	AVE(X)／Y	(X／Y)min	(X／Y)max	(X／Y)max／(X／Y)min
EXAMPLE 9	10.47	11.90	0.88	0.21	1.23	5.86
EXAMPLE 10	11.18	11.90	0.94	0.56	1.54	2.75
COMPARATIVE EXAMPLE 7	14.52	11.90	1.22	0.95	1.42	1.49
COMPARATIVE EXAMPLE 8	15.59	11.90	1.31	1.04	1.37	1.32

FIG. 28

	S50 (μm)	S85 (μm)	<10μm (%)	<15μm (%)
EXAMPLE 9	7.67	10.96	75.3	100
EXAMPLE 10	4.49	8.51	90.2	98.9
COMPARATIVE EXAMPLE 7	4.17	5.85	100	100
COMPARATIVE EXAMPLE 8	5.08	6.90	100	100

FIG. 29

		Nd (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	(MIXTURE RATIO)
EXAMPLE11	LOW R ALLOY	27.4	-	27.40	1.06	0.3	-	-	bal.	95
	HIGH R ALLOY	-	40.0	40.00	-	0.3	10.0	2.0	bal.	5
EXAMPLE12	LOW R ALLOY	34.7	-	34.70	1.06	0.2	-	-	bal.	95
	HIGH R ALLOY	-	60.0	60.00	-	0.2	30.0	2.8	bal.	5
COMPARATIVE EXAMPLE 9	LOW R ALLOY	25.3	2.1	27.40	1.06	0.2	-	-	bal.	95
	HIGH R ALLOY	40.0	-	40.00	-	0.2	10.0	2.0	bal.	5
COMPARATIVE EXAMPLE 10	LOW R ALLOY	31.5	3.2	34.70	1.06	0.2	-	-	bal.	95
	HIGH R ALLOY	60.0	-	60.00	-	0.2	30.0	2.8	bal.	5

FIG. 30

	Nd (wt%)	Dy (wt%)	TOTAL R (wt%)	B (wt%)	Al (wt%)	Co (wt%)	Cu (wt%)	Fe (wt%)	Br (kG)	HcJ (kOe)
EXAMPLE11	26.0	2.0	28.0	1.0	0.3	0.5	0.1	bal.	14.2	12.2
EXAMPLE12	33.0	3.0	36.0	1.0	0.2	1.5	0.14	bal.	12.1	25.3
COMPARATIVE EXAMPLE 9	26.0	2.0	28.0	1.0	0.2	0.5	0.1	bal.	13.8	12.6
COMPARATIVE EXAMPLE 10	33.0	3.0	36.0	1.0	0.2	1.5	0.14	bal.	11.7	25.5

FIG. 31

	AVE(X)	Y	AVE(X)／Y	(X／Y)min	(X／Y)max	(X／Y)max／(X／Y)min
EXAMPLE 11	6.40	7.10	0.90	0.41	1.34	3.27
EXAMPLE 12	7.72	8.30	0.93	0.33	1.36	4.12
COMPARATIVE EXAMPLE 9	7.81	7.10	1.10	0.91	1.15	1.26
COMPARATIVE EXAMPLE 10	10.29	8.30	1.24	0.94	1.21	1.29